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ABSTRACT

This paper presents future interactions between curriculum and test content, particularly standardized achievement test content. Three topics are discussed in question-answer form. (1) Will standardized testing dictate the curriculum in the future? An analysis of major curriculum change indicates two changes in the past 25 years: a revolution within particular content areas (e.g., mathematics and linguistics) and a narrowing of the curriculum to basic skills. Standardized tests seem to exercise little influence upon these types of major curricula change. Inferences from historical patterns indicate that testing will exercise little influence on the curriculum in the future. (2) Will test coverage provide a better match for the curriculum in the future? While the present curriculum-test content match is believed to be quite good, it is hoped that conclusions drawn from present studies will lead to developments in the theory of content validity for multi-level achievement batteries. (3) Will recent developments in testing methodology influence the test-curriculum match? Developments in Item Response Theory and Latent Trait Methodology have been shifting interest from curriculum-test content match to trait methodology. The inevitable result of tipping the balance in favor of a trait methodology will be to attenuate the strict fit between curriculum content and test content. (PN)

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THE RELATIONSHIP BETWEEN THE CURRICULUM AND TEST DEVELOPMENT: SOME CONSIDERATIONS FOR THE FUTURE

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INTRODUCTION

This symposium attempts to look into the future, in that tiny bit of the world loosely referred to as testing. I must confess at the outset to considerable pessimism about the enterprise, thinking it exceptionally hazardous if not futile, beyond a horizon of only several years. Nonetheless, such future-gazing is an inevitable, probably genetically given, human instinct. Our safest refuge in exercising this penchant is the advice of Thucydides, some 2400 years ago, that the future will resemble the past: as drab as that may seem.

My particular assignment is to look at the interaction between the curriculum and test content, particularly standardized achievement test content, as we move into the future. There are, of course, numerous aspects of the interaction between the curriculum and test content about which one might comment. Let me narrow my remarks to just three of these topics, ones which seem to have some special contemporary relevance. In each case I will treat the topic from my perspective as a test author, making, as per the aforementioned advice, some effort to relate the future to the past.

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WILL TESTS DICTATE THE CURRICULUM?

Will standardized testing dictate the curriculum in the future? (Some would phrase the question as "...continue to dictate the curriculum?") The classical position on this issue, of course, is that testing follows the curriculum or that the curriculum dictates the test. The more popular position, at least in some quarters, is that testing, in fact, dictates the curriculum and inappropriately so.

It does not seem to me that standardized testing has dictated the curriculum in the past, nor is it likely to do so in the future. The interaction between the curriculum and testing with respect to this question of which leads is best illustrated in the analysis of major curriculum changes. There have been two types of major curriculum changes in the past 25 years. The first involves a revolution within a single content area, perhaps the best examples being the introduction of modern mathematics in the mid-60's and the introduction of linguistics in the mid-70's. The second type of change has been a narrowing of the curriculum -- at least the curriculum of real interest -- to the so-called basic skills, a process that has been occuring for at least the last ten years.

With respect to both of these types of major curricular change, standardized tests seemed to exercise little influence. In fact, the curricular changes seemed to proceed with a kind of cavalier disregard for testing.

In the mid-60's, none of the major standardized tests contained items specific to modern mathematics but the curriculum

revolution swept the country anyway, as test developers scrambled madly to respond. In the mid-70's, none of the major tests contained items specific to linguistics; once again the curriculum revolution swept the country anyway and once again, test developers scrambled madly to respond.

Regarding the narrowing of curricular interests to the basic skills, the process seemed to begin just about the time that we saw perhaps the greatest flowering of varieties of tests in terms of content. Just in advance of the "back to basics" movement, we had the publication of several well developed series of tests in such areas as biology, chemistry, algebra, and modern foreign languages; we had the rather stunning array of tests in the first round of the National Assessment of Educational Progress; and we had, my favorite examples, test in Arts and Humanities, Business and Economics, and Technical Comprehension in the first edition of the Stanford High School tests. None of these developments seemed to exercise any influence in achieving some variety of curricular emphases. (And, unfortunately, they made major publishers gun-shy about developing anything other than basic skills tests.)

I infer from these historical patterns that testing will exercise little influence on the curriculum in the future. Rather, test developers will continue to respond, often in a panic, to curricular trends which themselves arise unpredictably. (I might note that the growing lack of interest in tests related to any areas outside the basic skills has been one of my greatest disappointments as a test author.)

Perhaps the major exception to the position taken here -- and probably the one giving rise to the worry that the test dictates the curriculum -- is the circumstance in which a school administration at the local or state level uses a test as a kind of "club" to emphasize what is to be taught. In such instances, the test has already been accepted as an accurate or at least serviceable definition of what is to be taught, i.e. the intended curriculum, and both students and teachers are expected to pay attention to it. This strategy, in my opinion, is not a matter of allowing the test to dictate the curriculum but simply using the test as one definition of the curriculum. Otherwise the same school administration that adopted this particular test would choose or develop another one. Such use of tests as reinforcers of the curriculum will, I believe, continue to increase, probably with the most interesting developments in the next ten years coming at the collegiate level.

THE TEST - CURRICULUM FIT

Will test coverage provide a better match for the curriculum in the future? The question is prompted by recent reports that the match between the content of standardized tests and curricular materials, e.g. in mathematics, is quite poor or at least not nearly as good as one would suppose. Let us limit the analysis to the basic skill areas, which are the areas of greatest concern to test users and the basis for recent reports.

I believe we have gone about as far as we can in matching the content of standardized achievement tests to curriculum content and are not likely to see improvements in this regard in

the future. (In fact, some lessening of the test-curriculum fit might be anticipated, a matter to be taken up in connection with a third question later on.) Further, I believe the present match between test content and the curriculum is quite good, certainly far better than widely publicized reports would credit.

While I take issue with the conclusions usually drawn from the studies referred to here, their publication will lead, I hope, to some useful developments in the next several years for the theory of content validity for multi-level achievement batteries, a theory which I think has never been well articulated. Exposition of the theory and practice of content validation has nearly always been done with respect to a single, one-level course or textbook, e.g. American History or Introduction to Psychology. Recently published studies follow this model.

In contrast, when I build a multi-level achievement test (and I venture to say I speak for at least some of my colleagues here) and am working on one particular level of it, say the one designed principally for use in grade 4, I am not trying to measure the fourth grade textbook. Rather I am trying to measure the students in grade 4, some of whom happen to be operating at the level of content represented in fourth grade curriculum materials while others are operating at a second grade level, others at the sixth grade level, and so forth. If the multi-level test built primarily for use in grade 4 did not have a fair sampling of non-grade-4 material, in order to properly account for such individual differences, on the assumption that there is some underlying continuity in the curriculum, then something

would be amiss.

One of the key contributions of educational and psychological testing, since its earliest days, has been to remind us continually of the extent of individual differences and of their importance in the educational process. Unfortunately, I don't believe current expressions of the theory of content validity treat this problem, but I would hope that the studies to which I refer will stimulate such treatment in the near future.

DEVELOPMENTS IN TEST METHODOLOGY

Will recent developments in testing methodology influence the test-curriculum match? Other speakers in this symposium as well as in numerous other places have addressed the question of the relationship between these methodological developments and the form or format of testing. There now seems to be a consensus that this relationship will change in important ways. But what do these developments augur for the problem of test-curriculum match?

While I am hesitant to make such a declaration for fear of the pandora-box effect it may have, my guess is that recent developments in testing methodology will lead to a less perfect match between test content and curricular content than what presently obtains.

The issue turns on the uneasy place which the concept of content validity has always held in test theory vis a vis the strong tradition of traits, abilities, or dimensions around which test theory was largely developed. Most of the foundation of test theory, e.g. in the work of Spearman and Thurstone, dealt

with the relationship betwen a test and a trait or traits. Achievement testing borrowed many of the concepts and test development procedures growing out of this tradition, based on the little-investigated assumption that calling something by a single name, e.g. Reading or Mathematics, was sufficient to satisfy the demands of the trait concept.

Most test developers recognized the uneasy position they were in and generally resolved it by some type of compromise between the demands of content validity, which allowed for unlimited heterogeneity of test content, and the demands of trait methodology, which eschewed heterogeneity. Through the late 1960's and all of the '70's, with the development of objectives-based curricula and criterion-referenced testing, the compromises tilted increasingly away from the demands of trait methodology and in favor of a strict curricular content-test content match.

The burgeoning developments in Item Response Theory and Latent Trait Methodology have, it seems to me, for the past several years been shifting the compromises in the other direction. Ten years ago, to call an item "non-fitting" and even think about eliminating it from an achievement test on that basis would have been sacrilegious. Today, the notion does not seem so far fetched. As we proceed, eliminating such items may not be routine -- for I believe we will still be compromising -- but it will not be uncommon. And, of course, once we start eliminating single items we will be faced with the prospect of eliminating blocks of items.

The inevitable result of tipping the balance in favor of a trait methodology will be to attenuate the strict fit between curriculum content and test content. The only possible alternatives to this conclusion seem to be assuming that we will move to test batteries of perhaps 25 or more separate tests, which I do not believe the marketplace would tolerate, or assuming that developers of curricular materials will adopt a trait approach, a notion which seems almost entirely devoid of plausibility.

Suppose that the fit between test content and curricular content does become less strict than it is currently. Will this be a healthy development for testing? Or, more importantly, will it be a healthy development for education? The answer to these questions, to which I will not hazard a guess, will be among the more interesting to watch unfold in the coming years.

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